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SUBJECT: INDIA WANTS HIGH FIDELITY MISSILE DEFENSE EXERCISES

Classified By: DCM Robert O. Blake, Jr. for Reasons 1.5 (B, D)

1. (S) Summary: In her remarks at the initial working group meeting of the US-India Missile Defense (MD) Workshop in Hyderabad on March 3-4, MEA Additional Secretary for International Security Meera Shankar affirmed New Delhi's desire for a cooperative MD technology relationship with the US over the long term, and said that the GOI would like to formulate its overall strategic MD objectives in cooperation with the USG. The subject of "Framework MOU,s" for facilitating missile defense cooperation, similar to what the US has with a select group of other countries, was raised by the Indian side. On the planned Workshop exercises, the Indian delegation hoped for a very high-fidelity simulation of actual threats and missile defenses that would generate hard data for use in MD strategic and acquisition planning. The Indian delegation presented a classified briefing reflecting their perception of the ballistic missile threat to India, and a separate briefing characterized as the GOI "wish list" for US-India Ballistic Missile Defense (BMD) modeling and simulation exercises. After it became clear that GOI desires were beyond the scope of the MDA's International Modeling and Simulation (IMS) tool, the US delegation re-focused the Indian delegation on the original proposal for a realistic, but lower fidelity, plan to exercise decision-making at the policy and operational levels during a simulated missile attack. The GOI agreed, but asked for much higher fidelity modeling and simulation exercises in the future. A framework for upcoming Planning and Command Post Exercises (PLANEX/CPX) was agreed upon, and options for the GOI to pursue high-fidelity MD exercises with the USG were discussed. Noticeably lacking from the discussions were explicit references to indigenous MD production, categories of assets India might like to defend against missile attack, or co-production of BMDS hardware with the US. Hosted at one of India's most sensitive missile research facilities, this exchange reflected the deepening level of candor in the US-India MD relationship. End Summary.

2. (S) While welcoming the US delegation, Dr. V.K. Saraswat of the Defense Research and Development Organization's Research Centre Imarat (DRDO/RCI) discussed the common missile threats facing both India and the US, and the mutual benefits of working together on them. He hoped that the US-India MD Workshop would lead to a formulation to mitigate such threats. In her opening remarks, A/S Shankar added several key points, including:

- Both countries have the political commitment to advance missile defense cooperation and strengthen US-Indian ties;
- Both sides emphasize MD as a stabilizing tool to support the global security environment;
- India was among the first countries to recognize and support US missile defense proposals;
- The GOI welcomes the US offer to make the Patriot Advanced Capability-2 (PAC-2) MD system available as part of NSSP (Next Steps in Strategic Partnership) Phase 1;
- India hopes for close cooperation with the US on missile defense technology over a long time horizon;
- Missile defense can help India maintain a credible "No First Use" nuclear posture;
- By itself, the international nuclear non-proliferation regime cannot stem proliferators, which "tend to collect in our neighborhood"; and,
- India is in an "arc of proliferators," and MD might help stabilize the situation and neutralize those using "nuclear blackmail."

3. (SBU) Phil Jamison, OSD Office of Missile Defense Policy, noted the February 22 PAC-2 briefing in New Delhi at which US missile defense policy, including cooperation with allies and friends, had been discussed extensively. He tied those discussions to the meeting in Hyderabad, suggesting that both sides might be able to look back and view these two weeks as the beginning of what could be a long-term missile defense relationship. A/S Shankar agreed.

US Ballistic Missile Defense System (BMDS) Update

14. (SBU) Robert Ciarrocchi, Chief of MDA/ISA's Asia and Middle East Division, presented a status update on the US BMDS. He emphasized Presidential guidance to deploy available missile defenses while working on future systems, and to cooperate with existing allies and new friends. Ciarrocchi explained MDA efforts to carry out that guidance, including a spiral development program that is moving from lower-tier missile defenses to overarching systems that integrate sensors, communication links, and interceptors for combating ballistic threats in boost, mid-course, and penetration phases. He also underscored expanding MD cooperation with allies and friends worldwide.

15. (C) Questions from the Indian delegation on Ciarrocchi's brief included:

- What types of MD memoranda of understanding does the US have with its partners?
- Are MD systems specifications based on the needs of friends and allies, or just on US needs?
- How important is interoperability with allies in US BMDS design?
- Does the US intend to have global missile launch and tracking sensors with regionalized interceptor batteries?
- What is the status of SBIRS (Space Based Infrared Radar System)?
- Are kinetic energy interceptors and spaced based missile defenses integrated or separate programs?
- What does the US mean by "near-peer" ballistic missile threat?

PLANEX/CPX Dialogue

16. (S) Scott Barham, an SRS Technologies contractor for the MDA's Joint National Integration Center (JNIC), next opened a dialogue on the background, assumptions, scope, and agenda for the MD Workshop. During those discussions, a large gap between GOI desires and what JNIC was prepared to deliver quickly became obvious. MDA plans suggested a PLANEX and CPX using the JNIC's generic International Modeling and Simulation (IMS) software to provide ballistic missile attack planning and execution experience for policy-makers and air defense commanders. While also anticipating a PLANEX and CPX, India hoped for very high-fidelity modeling and simulation that incorporated parameters of actual threats, including MD countermeasures, and parameters of actual/planned defense options against a variety of ballistic attack scenarios. In short, the GOI wanted hard data for developing BMDS strategy and making acquisition decisions.

17. (S) Barham explained that IMS can approximate threat and BMDS parameters well enough to aid in concept of operations development and to refine MD tactics, techniques and procedures, but that it was not an appropriate tool to generate data for acquisition decisions. The Indians were concerned that the proposed exercises were not much of a step up from modeling and simulation demonstrations previously presented, but the US delegation assured them that the proposed PLANEX and CPX were fully interactive with outcomes that vary based on the decisions of the participants.

18. (S) Jamison recommended that India initially focus on a realistic, but lower fidelity, plan to exercise decision-making at the policy and operational levels during a missile attack. Specifically, he recommended an initial exercise scenario set in the 2008 time-frame. He emphasized the importance of having a cross-section of relevant government policy-making organizations participate -- i.e., MOD and the PM's security staff as well as MEA. After further discussion, the Indian side agreed to the following vision for the PLANEX/CPX:

- Detection ability and intercept parameters as close as possible to BMDS planned for the 2008 time-frame;
- A two-part exercise with one iteration using stand-alone missile defenses and a second incorporating early warning sensors and upper-tier BMDS;
- Survivability of BMDS assets as part of the model;
- Simulation of geography and terrain that is relevant to India;
- Demonstration of differences in missile threats "by way of timeline";
- An exercise scope that includes land and sea-based

(submarine launched) multi-directional ballistic attacks (no winged aircraft or cruise missiles) including missile launches from short, medium, and long distances; and

- Policy involvement at an appropriate level.

19. (C) Additional dialogue centered around how JNIC could incorporate as many of the GOI desires as possible into the PLANEX/CPX using existing IMS software.

10. (C) PolOff suggested that, in light of the gap between Indian desires for higher fidelity modeling and simulation and what the MDA was currently able to offer, the GOI could define their requirements and transmit a separate letter of request to the USG while continuing with the current effort. Jamison also suggested that both sides look for another forum to discuss missile defense policy-program issues, such as some type of US-India missile defense working group on the margins of other political-military technical discussions.

GOI Ballistic Missile Threat Perception

11. (S) A.S. Sarma, DRDO/RCI Air Defense Project Director, gave a classified briefing on the GOI's perception of the Ballistic Missile Threat to India. The Indian delegation asked that information contained in the brief not be given wide dissemination within the USG, but controlled on a need-to-know basis. The brief included threat rings from existing ballistic threats in the region, as well as those under development. The main thrust was that the ballistic threat to India was not from a single sector, but, in a worst-case scenario, could include coordinated, simultaneous attacks from 360 degrees with multiple objects. (Note: A hard copy of the briefing was not made available to the US delegation. End Note.)

GOI Proposals for Future Modeling & Simulation Cooperation

12. (S) As part of the classified brief, the Indian delegation offered to make DRDO experts available, at some unspecified point in the future, for a collaborative effort with the US to develop advanced BMDS modeling and simulation software. Speaking in the context of MD modeling and simulation, Sarma listed available Indian expertise as: 1) System Analysis, 2) Modeling and Simulation, 3) Planning and Control, and 4) Software Development. His bottom line: if the US wants India to do (future) hardware and software development, that could be used with "others," India wants to do it.

13. (C) N. Prabhakar, a DRDO/RCI Project Director, also presented a "BMD Simulation For Planning" briefing that he characterized as a GOI "wish list" for cooperative BMD exercises. GOI areas of interest, from his briefing slides, include:

- Threat Perception and Analysis;
- Effectiveness and Cost Economics;
- Design Considerations;
- Macro/Micro Planning; and
- Simulation Scenarios

Under Simulation Scenarios, Prabhakar listed additional sub-points as follows:

- Define the Parameters:
 - Ballistic Missile Threats
 - MD Countermeasures
 - BMDS
- Interception Policy:
 - Effects of Change in the Threat Pattern
 - Adaptability/Growth Potential
 - Cost of Defense
 - Time Imperatives
 - Kill Assessment
- Structure Definitions:
 - Impact of Lay-out Factors
 - Time-line Considerations
 - Hit to Kill/Near Miss
 - Warhead Kill Mechanisms
 - Multi-Sensors
 - Postulated Countermeasures
- Optimized Defense Layout
 - Leakage Probabilities
 - Defended Assets List
 - Sensor Capabilities

- Launch Platforms
- Sensor Platforms
- Interceptor Capabilities
- Communication Requirements
- Command and Control Strategies and Alternatives
- Integrated Logistics Management
- Trade-Offs
- Nominal Performance
 - Worst Case Performance
 - Parametric Sensitivity
 - Monte Carlo (random "roll of the dice" scenarios)
 - Break Point Analysis

PLANEX/CPX Road Map

14. (C) The working group reached broad agreement on the way ahead for a PLANEX as follows.

- 2005 Agenda:
 - May: Demonstration and technical explanation, by JNIC, of the IMS tool (in India);
 - August: Working Group meeting and Initial Planning Conference for the PLANEX (in India);
 - December: PLANEX (in India).
- Participation:
 - India: Representatives from the MOD, MEA, DRDO, NSCS, and the military services;
 - US: Representatives from OSD/P, MDA/IS, MDA/IC, State, and observers from PACOM.
- Primary Points of Contact:
 - India: Ms. Nutan Kapoor, MEA/DISA
 - US: Mr. Robert Ciarrocchi, MDA/ISA
- Purpose: Facilitated and iterative exercises to examine basic concepts of BMD planning and operations.
- Objectives:
 - Demonstrate impact of very short response times;
 - Demonstrate relevant short, medium, and long-range ballistic threats from multiple directions;
 - Demonstrate basic MD planning skills, BMDS design, and allocation of defensive resources;
 - Provide a representation of key policy and operational challenges associated with BMD planning and execution.
- Basic Event Configuration:
 - A relevant scenario, for India, using notional geography;
 - A relevant baseline threat depiction
 - Workstation configuration that incorporates both policy and operational considerations;
 - A first iteration relying on stand-alone BMDS; and
 - A second iteration demonstrating the added value of additional threat sensors and upper-tier BMDS.

15. (C) The Indian delegation preferred not to set a time for the CPX Final Planning Conference or the CPX itself until after the PLANEX in December. Details on the exact number and types of Indian participants and the IMS workstations needed to support them will be finalized at the August meeting.

MEA Closing Remarks

16. (C) In her closing statement, A/S Shankar referred to the "wish list" briefing, and affirmed her hope that US-India MD cooperation would go well beyond the proposed PLANEX and CPX. She claimed India may be interested in other BMD systems besides PAC-2, to include PAC-3, MEADS, and perhaps upper tier systems such as THAAD. Shankar also stated that the GOI would like to build its overall strategic missile defense objectives in cooperation with the USG.

Comment

17. (S) While not stated explicitly, the GOI appears to desire extensive US-India cooperation on BMDS, along the lines of what is developing between the US and Japan. Questions on MOUs, next generation BMDS, and availability of sensor and tracking data to US friends and allies all point in that direction, as do stated desires to cooperate on MD technology and formulate overall MD strategic objectives in coordination with the US. Moreover, the Indian delegation gave the impression of being willing to devote enough resources to missile defense to become a significant player. Indian strategic thinking on missile defense is in its infancy, but, as related in a conversation on the margins between PolOff and Dr. Saraswat, DRDO/RCI is on the cutting edge of strategic and acquisition planning with its technical focus on making hard data available to policy-makers.

¶18. (C) Noticeably lacking from the working group discussions were any significant GOI references to indigenous BMDS production, or reference to specific categories of targets they might like to defend against ballistic missile attack. During the meetings they made no specific mention of co-production of BMDS hardware or other offsets that could be part of future MD collaboration, although in private conversation with Jamison, Saraswat hinted that such cooperation might be a desirable longer-term goal.

Workshop Participants

¶19. (SBU) Participants in the MD Workshop meetings included:

Indian Delegation:

- Dr. V.K. Saraswat, Director, DRDO/RCI
- Meera Shankar, MEA Additional Secretary (Intl. Security)
- Nutan Kapoor Mahavar, MEA Under Secretary (DISA)
- Santosh Jha, MEA Deputy Secretary (Americas)
- N. Prabhakar, DRDO/RCI Project Director
- A.S. Sarma, DRDO/RCI Project Director (Air Defense)
- Surendra Kumar, DRDO/RCI Project Dir. (Missile Defense)
- N.V. Kadam, DRDO/RCI Emeritus Scientist (Mobile Systems)
- S. Jaya, DRDO/RCI Project Director (Communications)
- A.M. Tapas, DRDO/RCI Dep. Proj. Dir. (Regional Analysis)
- Debasis Dutta, DRDO
- Siva Kumar, DRDO/RCI (Microwave Sensors)
- Col. R. Bhutani, Operational Director
- Gp. Capt. S.K. Midha, Director of Air Defense
- Air Cmde. P. Singh, Integrated Defense Staff
- A.K. Chatterjee, DRDO Director of Intl. Cooperation
- K.V.S.S. Prasad Rao, DRDO Chief Controller, R&D (Tech.)

US Delegation:

- Robert Ciarrocchi, MDA/ISA Chief, Asia & Middle East Div.
- Phil Jamison, OSD/ISP Asst. for Missile Defense Policy
- Scott Barham, MDA/JNIC Contractor (SRS Technologies)
- Maj. Rick Bairett, US Embassy New Delhi Pol-Mil Officer

¶20. (U) This message has been cleared by Robert Ciarrocchi MDA/ISA, and Phil Jamison, OSD/ISP.
MULFORD